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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/975,522	10/10/2001	Christopher Peiffer	1014-141US02	9120
7590	07/14/2006			EXAMINER POLLACK, MELVIN H
Kent J. Sieffert Shumaker & Sieffert, P.A. Suite 105 8425 Seasons Parkway St. Paul, MN 55125			ART UNIT 2145	PAPER NUMBER
DATE MAILED: 07/14/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/975,522	PEIFFER ET AL.	
	Examiner	Art Unit	
	Melvin H. Pollack	2145	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 13 April 2006.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-8,10-18 and 20-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-8,10-18 and 20-25 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 10 October 2001 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____. | 6) <input checked="" type="checkbox"/> Other: <u>see attached office action</u> . |

DETAILED ACTION

New Examiner

1. This case has been transferred to a new examiner. His contact information is provided below.

Response to Arguments

2. Applicant's arguments with respect to claims 1-8, 10-18, and 20-25 have been considered but are moot in view of the new ground(s) of rejection.
3. In the response to the last office action, the applicant changed the scope of the claims by adding several new limitations regarding monitoring of specific response parameters to all independent claims. The examiner has determined that the change in scope is materially sufficient to necessitate search and consideration of the added limitations and/or clarifications. As a result, a final amendment is necessitated even if the examiner provides a new art rejection. The examiner acknowledges that no new matter has been added by this amendment.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
5. Claims 1-8, 10-18, 20-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aiken Jr. et al. (6,996,631) in view of Okanoya et al. (6,128,657).
6. For claims 1, 22, Aiken teaches a computer networking device (col. 7, line 50 – col. 8, line 50) for use (abstract) on a computer network (Fig. 4, #44) connecting a plurality of clients

(Fig. 1, #46) with a single physical server device (Fig. 4, #24), the clients and physical server device being configured to communicate using Hypertext Transfer Protocol (HTTP) (col. 1, line 1 – col. 7, line 10 in view of col. 8, line 50 – col. 9, line 30), the computer networking device comprising:

- a. An HTTP multiplexor/demultiplexor (Fig. 4, #20) configured to receive HTTP requests from the plurality of clients via a plurality of client TCP connections (col. 8, line 50 – col. 9, line 30) and to monitor response parameters (col. 10, lines 1-15) that are specific to individual ones of a plurality of server TCP connections from the computer networking device to the physical server device (col. 13, line 65 – col. 14, line 25),
- b. Wherein the HTTP multiplexor/demultiplexor includes at least one agent (col. 16, line 12), and
- c. Wherein upon receiving an HTTP request from the client (col. 15, lines 50-65), the respective agent selects one of the plurality server TCP connections based on the monitoring of the response parameters specific to the server TCP connections (col. 15, line 65 – col. 16, line 15) and routes the HTTP request to the selected server TCP connection for communication to the physical server device (col. 16, lines 15-30) over a corresponding socket on the physical server device, as a multiplexed HTTP request (col. 4, line 55 – col. 5, line 45 in view of col. 13, line 1 – col. 15, line 30).

7. Aiken does not expressly disclose that the HTTP multiplexor/demultiplexor includes a plurality of agents, each agent assigned to a different one of the client TCP connections. Okanoya teaches a method and system (abstract) of providing a load sharing system (col. 1, line 1 – col. 3, line 15) that utilizes a collection of agents to perform usage reporting (col. 5, lines 15-

35). At the time the invention was made, one of ordinary skill in the art would have added Okanoya's agent system to Aiken in order to better automate load sharing systems (col. 1, line 60 – col. 2, line 15).

8. For claim 3, Aiken teaches a computer networking method (abstract) for processing HTTP requests (col. 1, line 1 – col. 7, line 10 in view of col. 8, line 50 – col. 9, line 30), the method comprising:

- a. Monitoring a plurality of server TCP connections (col. 15, line 50 – col. 16, line 15) from a computer networking device (Fig. 4, #46) to a single physical server device (Fig. 4, #20) to determine a response parameter that is specific to each of the server TCP connections (col. 15, line 65 – col. 16, line 15);
- b. Receiving HTTP requests from a plurality of originating clients (col. 15, lines 50-65); and
- c. Selecting one of the server TCP connections based on the determined response parameter (col. 16, lines 15-30);
- d. Routing the HTTP requests to an individual network socket on the physical server device via a multiplexed TCP transmission using the selected server TCP connection (col. 4, line 55 – col. 5, line 45 in view of col. 13, line 1 – col. 15, line 30).

9. Aiken does not expressly disclose that the HTTP multiplexor/demultiplexor includes a plurality of agents, each agent assigned to a different one of the client TCP connections. Okanoya teaches a method and system (abstract) of providing a load sharing system (col. 1, line 1 – col. 3, line 15) that utilizes a collection of agents to perform usage reporting (col. 5, lines 15-35). At the time the invention was made, one of ordinary skill in the art would have added

Okanoya's agent system to Aiken in order to better automate load sharing systems (col. 1, line 60 – col. 2, line 15).

10. For claim 6, Aiken teaches a computer networking method (abstract) for data transfer (col. 1, line 1 – col. 7, line 10) between plural originating clients (Fig. 4, #46), a single physical server device (Fig. 4, #24), and a networking device (Fig. 4, #20) positioned on a computer network intermediate the clients and the physical server device (Fig. 4, #44), the method comprising:

- a. At the networking device (Fig. 4, #22),
- b. Monitoring a plurality of server TCP connections from the computer networking device to the physical server device to determine response parameters that are specific to each of the server TCP connections (col. 15, line 65 – col. 16, line 15);
- c. Listening for HTTP requests from the originating clients (col. 16, lines 45-65);
- d. Receiving HTTP requests from more than one of the originating clients (col. 15, lines 50-65);
- e. Selecting one of the server TCP connections based on the determined response parameter (col. 16, lines 15-30);
- f. Multiplexing the received requests for delivery to the physical server device via the selected server TCP connection (col. 13, line 65 – col. 14, line 25); and
- g. Sending the received requests via the selected server TCP connection to an optimal server socket on the physical server device, wherein the optimal server socket is selected based on the determined response parameter (col. 4, line 55 – col. 5, line 45 in view of col. 13, line 1 – col. 15, line 30).

11. Aiken does not expressly disclose that the HTTP multiplexor/demultiplexor includes a plurality of agents, each agent assigned to a different one of the client TCP connections.

Okanoya teaches a method and system (abstract) of providing a load sharing system (col. 1, line 1 – col. 3, line 15) that utilizes a collection of agents to perform usage reporting (col. 5, lines 15-35). At the time the invention was made, one of ordinary skill in the art would have added Okanoya's agent system to Aiken in order to better automate load sharing systems (col. 1, line 60 – col. 2, line 15).

12. For claim 24, Aiken teaches (abstract) a computer networking device (col. 7, line 50 – col. 8, line 50) for improving data transfer (col. 1, line 1 – col. 7, line 10) via a computer network (Fig. 4, #44), the device being configured to monitor a plurality of persistent server socket connections from the computer networking device to a single physical server device (col. 13, line 1 – col. 15, line 30) to determine a response parameter that is specific to each of the server socket connections (col. 15, line 65 – col. 16, line 15), receive HTTP requests from a client (col. 15, lines 55-65), determine an optimal one of the server sockets for each HTTP request based on the respective response parameters for each of the server sockets (col. 4, line 55 – col. 5, line 45 in view of col. 13, line 1 – col. 15, line 30), and to send each HTTP request to the determined optimal server socket for the request via a multiplexed TCP transmission (col. 16, lines 15-30).

13. Aiken does not expressly disclose that the HTTP multiplexor/demultiplexor includes a plurality of agents, each agent assigned to a different one of the client TCP connections.

Okanoya teaches a method and system (abstract) of providing a load sharing system (col. 1, line 1 – col. 3, line 15) that utilizes a collection of agents to perform usage reporting (col. 5, lines 15-35). At the time the invention was made, one of ordinary skill in the art would have added

Okanoya's agent system to Aiken in order to better automate load sharing systems (col. 1, line 60 – col. 2, line 15).

14. For claims 2, 5, 13-18, 23, 25, Aiken teaches that the multiplexor/demultiplexor is further configured to receive multiplexed HTTP responses from the physical server device over the individual server TCP connection and to route those responses to the clients via a plurality of client TCP connections (Fig. 12).

15. For claim 4, Aiken teaches that the response parameter is selected from the group consisting of at least-lengthy response time, last-accessed socket, fewest number of unfulfilled requests, type of requested data, and size of requested data (col. 16, lines 1-15).

16. For claims 10, 21, Aiken teaches that the response parameter comprises a least-lengthy response time (col. 10, lines 1-15).

17. For claim 11, Aiken teaches that the response parameter comprises a last-accessed server socket (col. 16, lines 1-15).

18. For claim 12, Aiken teaches that the response parameter comprises the fewest number of unfulfilled requests (col. 16, lines 1-15).

19. For claim 7, Aiken teaches that receiving HTTP requests from the originating clients occurs via client TCP connections (col. 8, line 65).

20. For claims 8, 20, Aiken teaches that the client and server TCP connections are persistent (Fig. 8).

Conclusion

Art Unit: 2145

21. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. They regard further teachings on load balancing among servers and/or sockets, with emphasis on connection monitoring and agents.

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melvin H. Pollack whose telephone number is (571) 272-3887. The examiner can normally be reached on 8:00-4:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Cardone can be reached on (571) 272-3933. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MHP
07 July 2006



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SUPERVISORY PATENT EXAMINER